



# sandy blaine



Fit Yoga, November 2006

Preventive Health Specialist

THE ATHLETIC YOGI

## Yoga for Your Knees

These hard-working joints may be the most neglected in your body...

By Matthew Solan

Virabhadrasana II  
(Warrior II Pose)

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**C**onsider for a moment the knee. Every day, this hard-working joint helps you to walk, run, climb, and jump. It moves like a well-oiled piston to accelerate you up steep cycling hills and keeps your legs pumping during that final treadmill mile. It helps make those tire-screaming stops on the tennis court and quick cuts to the basket for an easy lay-up.

What do you do in return for this generous support? Complain about it—a lot. Next to the back, knees are the number-one complaint among active men and women. About 19.4 million visits were made to physicians' offices in 2003 because of knee problems, according to the National Center for Health Statistics. It may be the most neglected, yet most crucial, body part. "We often don't think about the knees unless there's a problem," says yoga teacher Sandy Blaine, author of *Yoga for Healthy Knees* (Rodmell Press, 2005). "We work on the muscles that can make you pump a cycle, smack a ball, or pound the ground, but the knees are usually left behind."

The reason is most people don't know what to do. How do you condition a joint? The strategy is not to focus on the knee itself, but rather the various muscles and ligaments that support it.

### THE ANATOMY OF YOUR KNEE

The knee works similar to a door hinge to bend and straighten your leg. "It's arguably the most complicated joint, and one of the most vulnerable," says Blaine. Here's a look inside:

**Bones and Cartilage:** The knee joint is the junction of three bones: the femur, the tibia, and the patella. Articular cartilage covers the ends of the bones and the back of the patella, according

### ACHY KNEES? Try a Side of R.I.C.E.

**Y**ou need to wait out any knee pain before you attempt yoga, says instructor Sandy Blaine. To speed up the recovery time, take a lead from many exercise experts and apply a dose of R.I.C.E.: Rest, Ice, Compression, and Elevation. Rest the knee by staying off it and taking a break from regular activity. Apply ice several times a day to control swelling. Use a compressive elastic bandage applied snugly, but loosely enough, so it doesn't cause any discomfort. Finally, keep the knee elevated to increase blood flow to the area, which helps reduce inflammation. Before long your knee will be ready to strike a pose.

Poses to stretch and strengthen the knees:

- Virasana (Hero Pose)**
- Sukhasana (Easy Pose)**
- Baddha Konasana (Bound Angle Pose)**
- Parivrtta Parsvakonasana (Revolved Side Angle Pose)**
- Virabhadrasana II (Warrior II Pose)**
- Malasana (Garland Pose)**





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**Baddha Konasana**  
(Bound Angle Pose)



**Baddha Konasana**  
with forward bend

to Elizabeth Quinn, MS, an exercise physiologist in Seattle. This tough, elastic-like material absorbs shock from walking and running, and allows the knee joint to move smoothly. "Pads of cartilage called lateral and medial meniscus also provide cushion by acting as shock absorbers between the bones," she says.

**Muscles:** There are two muscle groups around the knee. The quadriceps comprise four muscles on the front of the thigh, which helps to straighten the leg from a bent position. The hamstrings, which bend the leg at the knee, run along the back of the thigh from the hip to just below the knee.

**Ligaments:** These strong, elastic bands of tissue connect bone to bone. "They provide strength and stability to the joint," says Quinn. Four ligaments connect the knee's femur and tibia: the medial collateral ligament (MCL), lateral collateral ligament (LCL), posterior cruciate ligament (PCL), and

anterior cruciate ligament (ACL).

**Tendons:** Tendons are fibrous cords of tissue that connect muscle to bone. In the knee, the quadriceps tendon connects the quadriceps muscle to the patella and provides power to extend the leg.

The most common ways to injure your knee is to change direction rapidly or misstep or land wrong from a jump, which can tear the ACL or another ligament, which sometimes happens with skiers and professional athletes like basketball and football players. The average active person, however, deals with old-fashioned achy or painful knees caused by muscular imbalance, says Blaine.

The muscles that surround and support the joint—quads, hamstrings, and hip rotators—can get out of balance where one side becomes weak. "This makes the kneecap set loosely and make it more prone to being twisted and more vulnerable to general wear and tear," she says. "The key to healthy, pain-free knees is to get the surrounding muscles back in balance."

Yoga can help to stretch and strengthen the surrounding muscular to restore balance, Blaine says.

**Hip rotators:** "There's a strong correlation between tight hip rotators and knee problems," says Blaine. The remedy for tight hip rotators is deep hip stretches. Her favorite pose for beginners is Sucirandhrasana (Thread the Needle Pose). Here, you lie on your back, bend your knees, and place one ankle just above the opposite knee. Lift both legs, reach one arm through the opening, and clasp your hands together around your thigh. "It's an easy and safe stretch that people can feel working almost immediately," she says.

**Quads:** For the quads, Blaine suggests the classic Virabhadrasana I and II (Warrior I and II Poses) as well as the more playful (and often more intense) Bhikasana (Frog Pose), which also works the inner thighs. Another great quad stretch is Malasana (Garland Pose), which resembles a deep squat, and also can be done with your back against the wall for those with particularly tight quads.



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**Hamstrings:** Supta Padangusthasana (Reclining Big Toe Pose) works the hamstrings while keeping you in a safe supine position. "Lying on your back is almost always the safest stretching position," says Blaine. The key with this pose, she says, is doing it with a completely straight leg, even if you can't bring it up very far, so that the ligaments behind the knee open and the hamstrings closest to the knee joint get stretched. "When you release tension from the muscles and ligaments in the back of the leg, you reduce tension on the knee joints," she says.

### KNEE ALIGNMENT

Another common knee ailment is "runner's knee," where your knees ache immediately after a run or the next day. The culprit: inflammation of the iliotibial band (ITB), a tendon that runs down the outside of the thigh. A tight ITB rubs on the bone at the knee until inflammation ignites. The pain often

goes away with rest, but if you don't stretch the ITB, your knee will throb after your next run.

A simple ITB stretch, says Blaine, is Jathara Parivartanasana (Reclining Twist Pose). Lie on your back with your knees bent and arms stretched out to the sides so you form a T. Cross your right knee over the left, and let your right foot hang over to the left side—your right knee is directly on top of your left knee. Shift your hips slightly to the right to allow your spine to move more freely. Drop both knees to the left as far as is comfortable while you keep your shoulders grounded. This stretches the right ITB. Switch sides and repeat the twist to the right to stretch your left ITB.

Yoga can also improve faulty feet and ankle alignment and help stabilize the knee joint. "Often, when the feet and ankles are off balance, where you favor one side of the foot and don't evenly distribute your weight, this can effect how your knee





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Malasana (Garland Pose)



Malasana with twist

joint is aligned," says Blaine. "This can result in excess stress on the knee." Balancing poses are great for improving feet and ankle alignment. Vrksasana (Tree Pose), for instance, teaches you to distribute your weight equally across your foot and ankle—"otherwise you'll tumble out of the pose," says Blaine. (Need more of a challenge? Try it with your eyes closed and notice how your feet work with your knee to stay centered.)

### GAIN WITH PAIN

As any yogi knows, your practice can often cause your knees to ache. Yoga instructor Adrienne Reed says to use the pain to your advantage. "Pain is a gift," says Reed, whose many yoga DVDs include *Power Yoga for Athletes*. "Yoga can teach you body awareness and how to differentiate between pain and discomfort. Discomfort is OK, but pain tells your body you need to pay attention to it, to work an area longer, and when to make the necessary adjustments like using props such as blocks and blankets or use a wall for support."

Reed has taught yoga to many professional and collegiate athletes with achy knees. She introduces poses that are restorative in nature—they stretch and support the knee, but in a relaxed way. "This way they can hold poses longer and receive more benefits of the stretch," she says. "Plus, it helps the knees relax and hang out for a while, which they rarely get to do." Reed chooses sitting poses such as Virasana (Hero Pose), which works the quads, Sukhasana (Easy Pose) for the hip rotators, and Baddha Konasana (Bound Angle Pose) for hip rotators and inner thighs. "When you are sitting in a pose, you can relax more deeply into it," she says.

A recurring problem both Reed and Blaine encounter is that athletes and active people don't use yoga when they need it most—after and in-between their workouts. "Stretching after workouts is so old school,

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but this is when it can be the most beneficial, since your muscles are really warm and ready," Blaine says. And, she adds, don't skip stretching and think you can make it up at your next yoga class. "Do that and, more than likely, you'll be back to square one in terms of progress the next time you do yoga," she says. "Yoga is upkeep and maintenance, not a fix-it-once approach and then leave it alone."

Joe Doebele, 41, an avid half-marathoner, was training hard on the muddy trails near his home in Portland, Oregon, for the upcoming Helvetia Half-Marathon, 13.1 miles of running through rolling Oregon hills. His routine included sprints up steep hills. Three weeks before the competition, he felt a deep ache above his kneecap that quickly spread to underneath. Walking was a challenge, let alone trying to run his usual eight-minute clip.

Doebele came across Blaine's book and began to follow her yoga sequence daily. "At first, the poses seemed too easy to accomplish much, although they did feel good," he says. But he noticed subtle changes. The surrounding musculature soon became stronger and balanced, and he made it to the race's starting line on time and pain-free.

But his greatest lesson came several days later. With the pain gone, he resumed his tough workouts, but he neglected Blaine's routine. It wasn't long before the pain crept back. "I painfully learned that yoga is not something you should do in a pinch," he says. "You have to stay with it."

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